DOCUMENT RESUME

ED 269 146 PS 015 770

AUTHOR Blair, Gillian; Kaiser, Ann P.
TITLE Single Subject and Group Data: Choosing the Middle Path.
PUB DATE Apr 86
NOTE 23p.; Paper presented at the Conference on Human Development (Nashville, TN, April 3-5, 1986).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Children; *Data Analysis; *Individual Differences; *Language Acquisition; Longitudinal Studies; Moderate Mental Retardation; *Mothers; *Research Problems
IDENTIFIERS Elicitation Techniques; *Group Data; Normal Children; *Strategic Behavior

ABSTRACT

Discussed are limitations of studies focused on group data and some alternative conventions that might be used in reporting data so that it accurately represents individual subjects' patterns of language development. Evidence is presented from (1) a study of mothers' attempts to elicit verbal behavior from their normally developing or moderately retarded children, (2) an 18-month study of developmental trends in mothers' choice of verbal behavior elicitation strategies, and (3) a review of 5 years of research presenting group data in five prominent journals and focusing on mothers' strategies for eliciting children's verbal behavior suggests that reporting only group data may be inadequate. Presentation of group data may be enhanced by (1) describing the number of subjects that resemble the group data; (2) showing the range, mean, and standard deviations of scores; and (3) presenting individual data graphically so that profiles deviating from the group data are immediately apparent. (RH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED269146

Single Subject and Group Data: Choosing the Middle Path

Gillian Blair and Ann P. Kaiser

Departments of Psychology and Human Development and Special Education

Peabody College of Vanderbilt University

Nashville, Tennessee

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Ann Kaiser

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

PS 015770

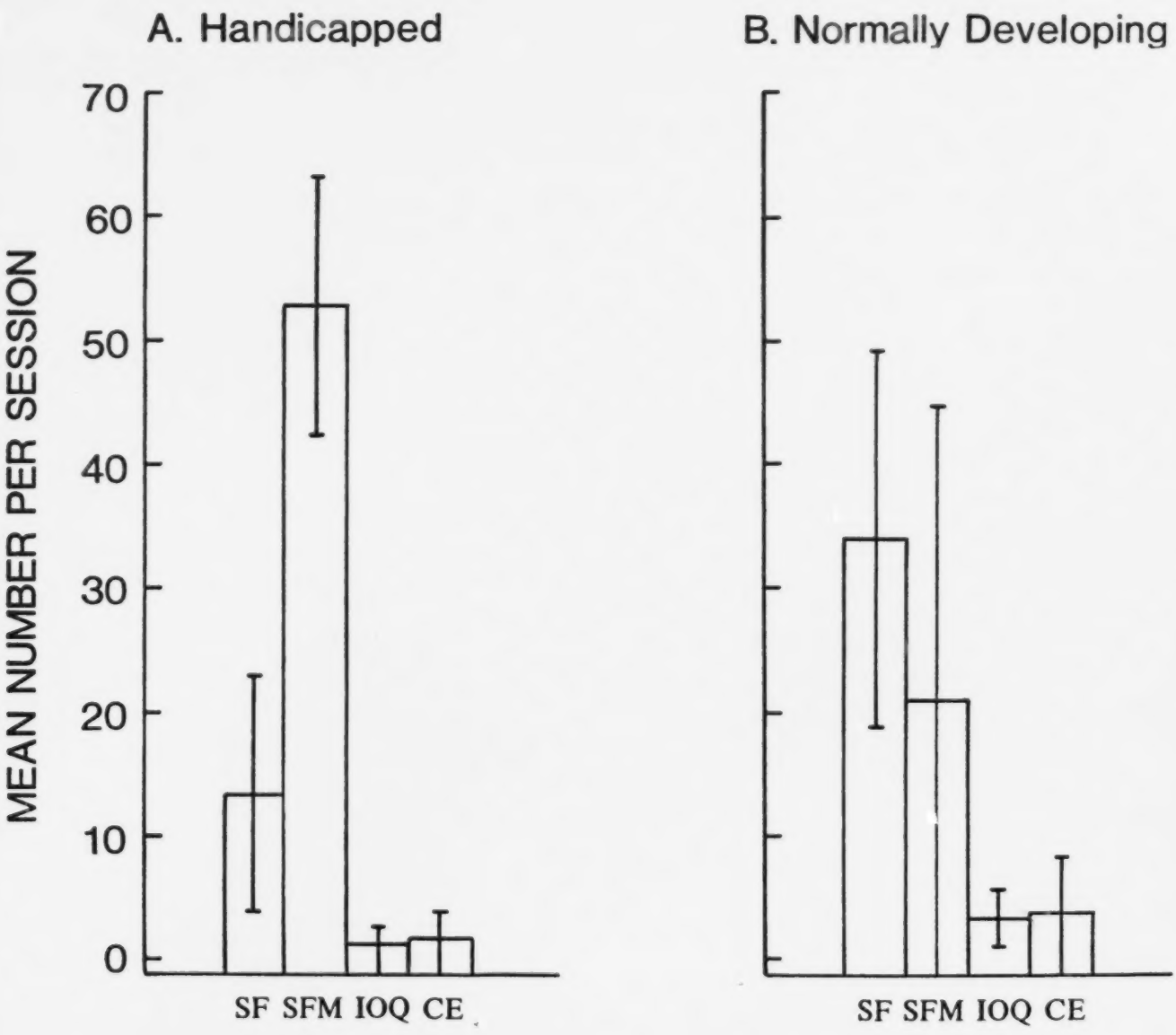
Introduction

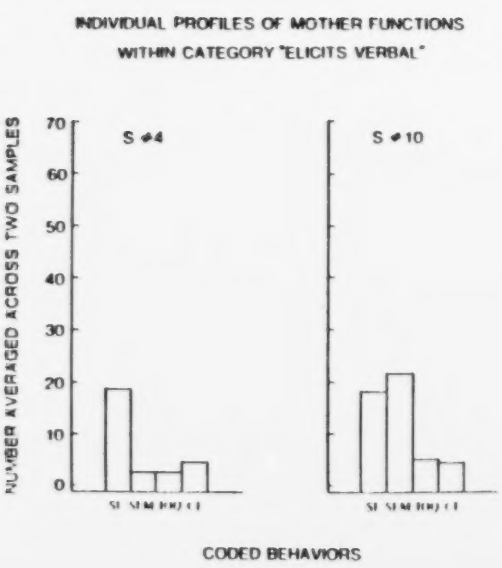
An increasing number of studies of child language development have presented group data to describe that development. However, research in this area presents some particular methodological problems related to the representativeness of group data in describing developmental trends. The primary assumption in studying groups of children has been the generalizability of findings increases with the number of subjects studied. This paper will discuss limitations of studies focused on group data and some alternative conventions that might be used in reporting data so that it accurately represents individual subjects' patterns of language development.

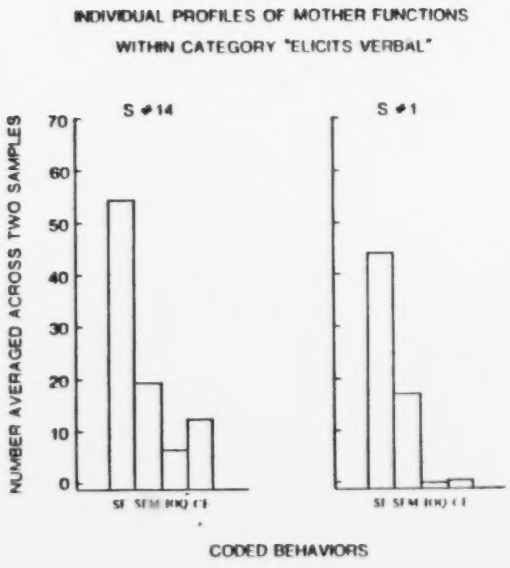
Methods

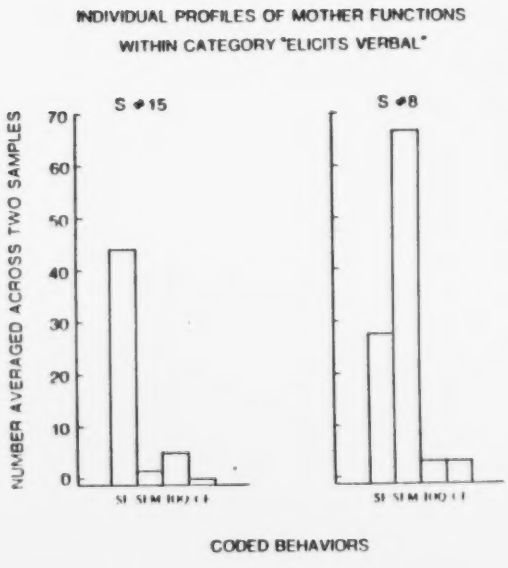
This data set represents a subset of data collected on 20 mother- child dyads who participated in an 18-month longitudinal study of language development. The subjects for this study were 10 children and their mothers. Six of these children were normally developing and four were moderately retarded. Comprehensive behavioral assessments and Bayley scores determined group membership. Data on mother-child interactions were collected during home observations. Observations lasted 20 minutes and were videotaped. This study examined both mother and child verbal behavior during the period the child's MLU was 1.01 - 1.25. This reanalysis focuses only on mother strategies to elicit child verbal behavior.

MOTHER FUNCTIONS WITHIN CATEGORY "ELICITS VERBAL"

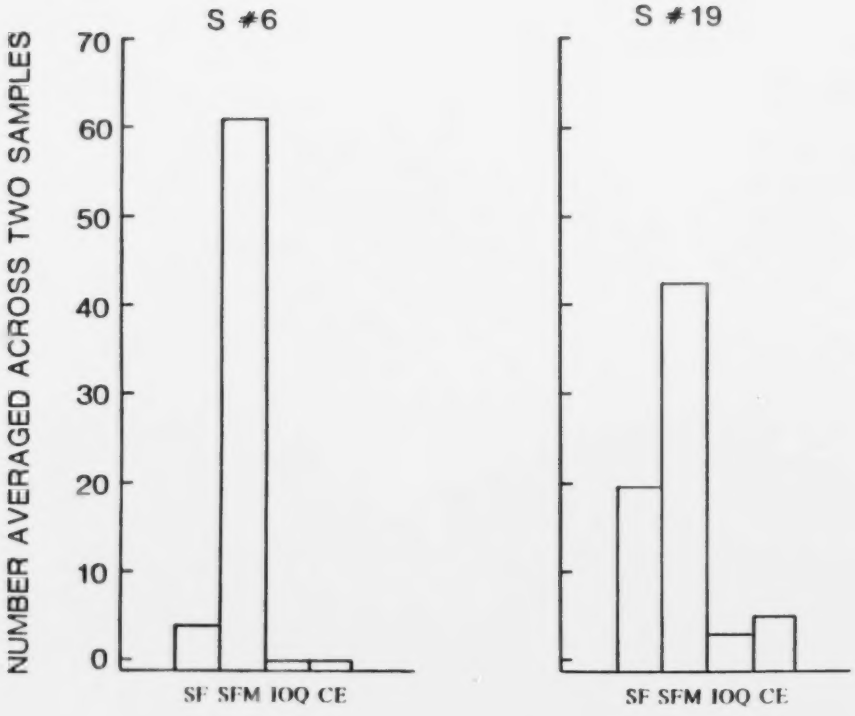



INDIVIDUAL PROFILES OF MOTHER FUNCTIONS
WITHIN CATEGORY "ELICITS VERBAL"
NUMBER AVERAGED ACROSS TWO SAMPLES
S #4
S #10
CODED BEHAVIORS


INDIVIDUAL PROFILES OF MOTHER FUNCTIONS
WITHIN CATEGORY "ELICITS VERBAL"
NUMBER AVERAGED ACROSS TWO SAMPLES
S #14
S #1
CODED BEHAVIORS

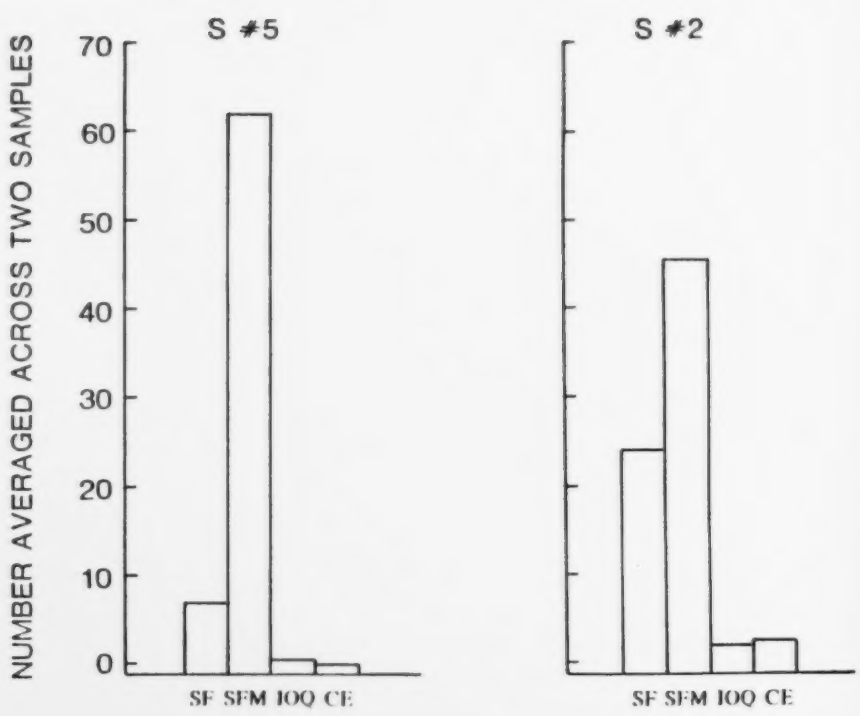

INDIVIDUAL PROFILES OF MOTHER FUNCTIONS
WITHIN CATEGORY "ELICITS VERBAL"
NUMBER AVERAGED ACROSS TWO SAMPLES
S #15
S #8
CODED BEHAVIORS

INDIVIDUAL PROFILES OF MOTHER FUNCTIONS
WITHIN CATEGORY "ELICITS VERBAL"



CODED BEHAVIORS

INDIVIDUAL PROFILES OF MOTHER FUNCTIONS
WITHIN CATEGORY "ELICITS VERBAL"



CODED BEHAVIORS

Results

This comparative study showed that the mothers of handicapped children relied heavily on modeling as a strategy to elicit verbalizations from their children. Whereas, mothers of normally developing children used simple questions (SF) as their eliciting strategy of choice. Individual data for the mothers of normally developing children showed 3 distinct patterns. Subject number 8 had a profile similar to that described for the handicapped group. Subject numbers 4 and 10 were low rate in their attempts to elicit verbalizations from their children. Thus, the group data for the normally developing accurately described only 50 percent of the sample. However, individual mothers of handicapped children were more accurately described by the group data.

Methods

This data set represents a subset of data collected on 20 mother-child dyads who participated in an 18-month longitudinal study of language development. The subjects for this study were 7 normally developing children and their mothers. Data were collected over 14 months with 4 periods of observation: 16, 21, 24 and 30 months. Observations of mother-child behavior were collected during home visits. Observations lasted 20 minutes and were videotaped. This reanalysis of the data is concerned only with developmental trends in mother choice of strategy to elicit child verbal behavior.

MOTHER STRATEGIES TO ELICIT CHILD VERBALIZATIONS
DISTRIBUTION BY FUNCTION

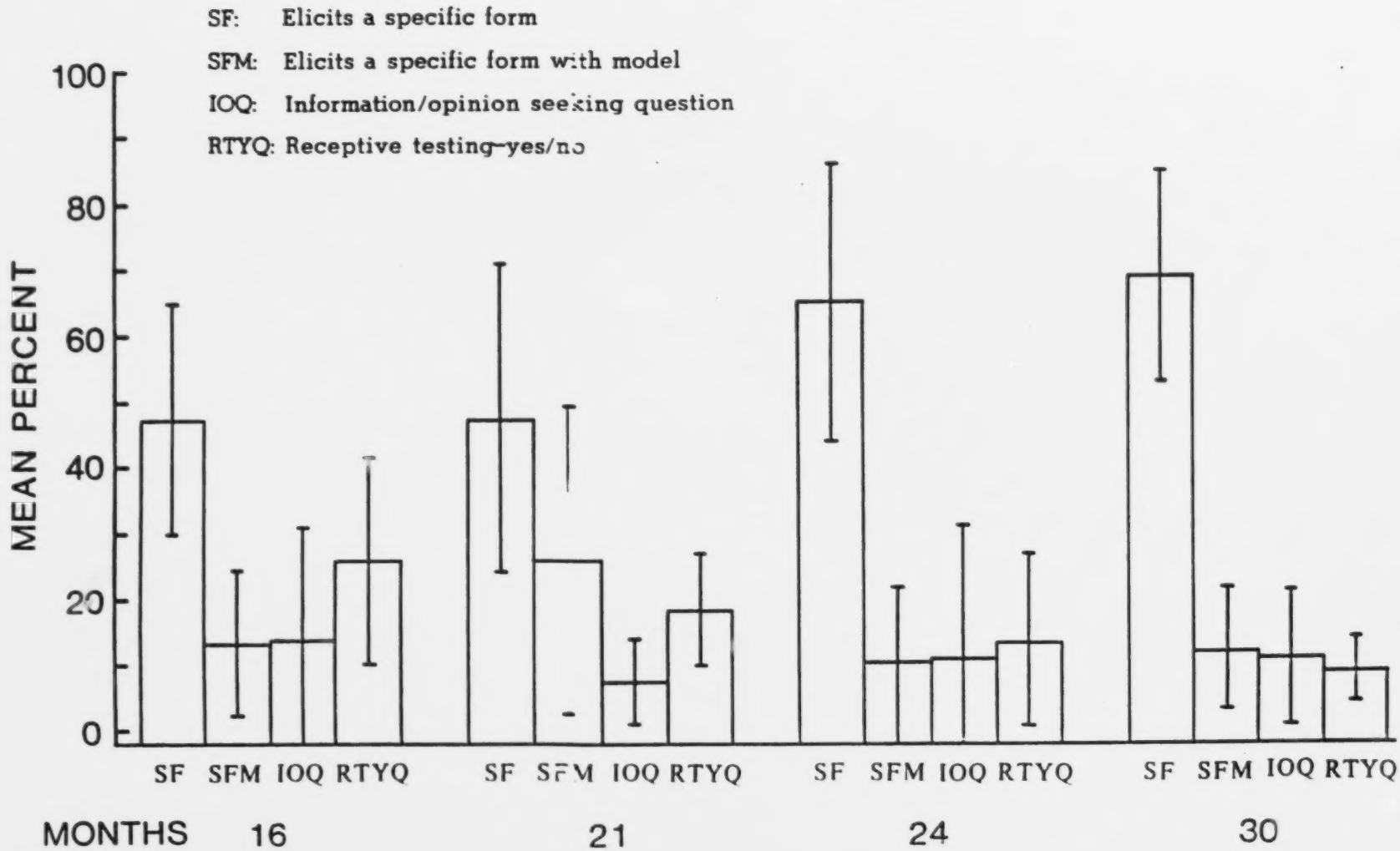


TABLE 1

VARIATION AMONG MOTHERS

	Subject #	1	3	8	14	15	16	17	Mean	SD
	Mother Coded Behaviors %									
16 mos.	SF	38	74	47	71	33	45	35	49	16.8
	SFM	12	5	49	12	8	11	8	15.0	15.2
	IOQ	21	9	0	2	0	13	50	13.6	17.8
	RTYQ	29	12	24	16	58	32	8	25.6	16.8
21 mos.	SF	58	79	20	48	69	42	17	47.6	23.4
	SFM	8	5	67	38	0	35	29	26	23.6
	IOQ	8	2	2	7	9	3	21	7.4	6.6
	RTYQ	24	14	11	7	22	19	33	18.6	8.8
24 mos.	SF	64	85	49	84	62	84	29	65.3	21.1
	SFM	13	8	34	4	0	0	14	10.4	11.8
	IOQ	1	3	13	0	0	0	57	10.6	21.0
	RTYQ	22	3	4	12	38	16	0	13.6	13.3
30 mos.	SF	87	57	63	61	71	82	53	67.7	12.8
	SFM	4	27	21	15	9	0	10	12.3	9.4
	IOQ	2	8	4	22	14	0	27	11.0	10.4
	RTYQ	7	8	12	2	5	18	10	8.9	5.2

Results

The group data showed a clear developmental progression of mother eliciting strategies over the 14 months. The mothers of these 7 normally developing children gradually increased their use of simple questions (SF) to elicit verbalizations from their children. Other available eliciting strategies were low rate and remained fairly stable over time. The group data demonstrated considerable mother variability. However, analysis of individual data revealed that only one of the 7 dyads actually showed the group developmental progression.

Method

A review of research presenting group data in 5 prominent journals over the last 5 years revealed that few research articles described the extent to which individual data supported the conclusions drawn from group data. This literature was concerned only with mother strategies for eliciting child verbal behavior. Journals reviewed were: Journal of Child Language; Child Development; American Journal of Mental Deficiency; Journal of Speech and Hearing Disorders; Journal of Speech and Hearing Research.

TABLE 2

SELECTED STUDIES REPORTING GROUP DATA OF MOTHER STRATEGIES
TO ELICIT CHILD VERBALIZATIONS

AUTHOR	N	MEASURES	RESULTS	INDIVIDUAL DIFFERENCES
McDONALD & PIEN (1982)	5	PROPORTION MOTHER VERBAL BEHAVIOR THAT IS QUESTIONING OR DIRECTIVE	CONTROL AND CONVERSATION ARE INCOMPATIBLE MOTHER STRATEGIES	VARIABILITY ATTENDED TO BUT NOT DESCRIBED
OLSEN-FULERO (1982)	11	ANALYSIS OF INDIVIDUAL DYADS DESCRIBED BY McDONALD & PIEN	STABILITY OF INDIVIDUAL VARIABILITY	DETAILED ANALYSIS
PETERSON & SHERROD (1982)	30	PRAGMATIC FUNCTION OF MOTHER INPUT	SIGNIFICANT GROUP DIFFERENCES	NOT ADDRESSED
EHEART (1982)	16	MOTHER IMITATIONS RESPONSES FEEDBACK	SIGNIFICANT GROUP DIFFERENCES	NOT ADDRESSED
LASKEY & KLOPP (1982)	17	MOTHER INTERACTIONAL STRATEGIES	NO GROUP DIFFERENCES	RANGE GIVEN
LEIFER & LEWIS	14	PRAGMATIC INTENT OF MOTHER QUESTIONS	NO GROUP DIFFERENCES IF CHILDREN MATCHED ON LINGUISTIC PARAMETERS	NOT ADDRESSED
CARDOSA-MARTING & MERN'S (1985)	20	PRAGMATIC FUNCTION OF LANGUAGE	SIGNIFICANT GROUP DIFFERENCES ON ALL MEASURES	NOT ADDRESSED

Results

A review of some recent studies describing mother verbal input to very young children (Table 2) revealed that few studies have explored whether individual behavior was adequately described by group data. The question of individual variablity was rarely addressed. The individual analysis of McDonald and Pien's data was a notable exception (Olsen-Fulero, 1982). Olsen-Fulero showed that observed variability in mother behavior was stable across time. These mother behaviors were described as representing stable interactional styles which either facilitated or inhibited the development of conversational skills.

Conclusions

The evidence from these three sources suggests that reporting only group data may be inadequate. The presentation of group data may be enhanced by:

Describing the number of subjects that resemble the group data.

Showing the range, mean and standard deviations of scores.

Presenting individual data graphically so that profiles that deviate from the group data are immediately apparent.

REFERENCES

Cardosa-Martins, C. & Mervis, C. B. (1985). Maternal speech to prelinguistic children with down syndrome. American Journal of Mental Deficiency, 89, 451-458.

Eheart, B. K. (1982). Mother-child interactions with nonretarded and mentally retarded preschoolers. American Journal of Mental Deficiency, 87, 20-25.

Lasky, E. Z. & Klopp, K. (1982). Parent-child interactions in normal and language-disordered children. Journal of Speech & Language Disorders, 47, 7-18.

Kaiser, A. P. & Blair, G. (1985). Interactional strategies of mothers with normal and mentally retarded children. Manuscript submitted for publication.

Kaiser, A. P. & Blair, G. (1985, October). Mother's strategies for eliciting verbal responses. Paper presented at the Boston Child Child Language Conference, Boston, MA.

Leifer, J. S. & Lewis, M. (1983). Maternal speech to normal and handicapped children: A look at question asking behavior. Infant Behavior & Development, 6, 175-187.

McDonald, L. & Pein, D. (1982). Mother conversational behavior as a function of interactional intent. Journal of Child Language, 9, 337-358.

Olsen-Fulero, L. (1982). Style and stability in mother conversational behavior: A study of individual differences. Journal of Child Language, 9.

Peterson & Sherrod, K. B. (1982). Relationship of maternal language to language development and language delay of children. American Journal of Mental Deficiency, 86, 391-398.